

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE
THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of
ROBERT LEE BURCHETTE, JR.

U.S. SERIAL NUMBER 10/785,214

Filing Date
March 17, 2003

For
FINGERPRINT VEHICLE ACCESS SYSTEM

Technology Center
2612

Examiner
Vernal U. Brown

Appeal Number: _____

Brief on Appeal

This brief is filed in appeal of the rejection of the Examiner dated May 14, 2007

The Commissioner is hereby authorized to charge the Petition Fee of \$255.00
In compliance with 37 CFR § 41.20(b)(2) plus any additional fees associated
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Burchette, Jr.) Attorney reference: 30924-01
)
Application No.:	10/785,214) Examiner: Vernal U. Brown
)
Filing Date:	February 24, 2004) Group Art Unit: 2612
)
Title:	Fingerprint Vehicle Access System) Confirmation No.: 8815
)
) Customer No.: 46591

BRIEF ON APPEAL

Mail Stop Brief on Appeal – Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Real Party in Interest

Easy Access Inc., a Florida Corporation, having a mailing address at P.O. Box 188, Spartanburg SC 29304.

Related Appeals and Interferences

None known to Appellant

Status of Claims

Claims 17, 19, 20, 23-26, 28, 29 and 34-38 are pending.

Claims 1-16, 18, 21-22, 27 and 31-33 have been cancelled. The claims appear in the claims Appendix Section.

Status of Amendments

Amendments presented after Final Rejection on August '14, 2007 were not entered because amendments proposed to claim 28 "requires further search..."

Clarifying amendments were proposed to claims 28, 34 and 35.

Summary of Claimed Subject Matter

The disclosure and claims are directed to electronic fingerprint access control devices for vehicles, especially automobiles characterized by an external housing bearing an electronic fingerprint sensor under a protective cover and a "black box" controller preferably located within the vehicle. Pages 4-5 [0019], Fig. 1, 1A, 2.

The claimed device is intended for use as an "after market" product, meaning that it is incorporated into the locked vehicle by a dealer or other party subsequent to the vehicle leaving the point of final assembly. Page 3, line 13 [0010], page 4, line 5 from bottom [0018]. An after market product has the additional advantage of being inherently removable to a different vehicle.

Fingerprint access is key to this device. Page 8, lines 7-9 [0030]. Fingerprint access is not equivalent to forensic print identification but uses a limited number of standard print characteristics to create a "pin" number. The sensor per se is not the subject of this invention. Use of commercially available sensors in a unique system is claimed.

The inventive device is useful on newer vehicles which have, or are converted to have, electronically activated access control systems. Page 4 [0018]; page 9, lines 1-8 from the bottom [0035].

Because the claimed device is an aftermarket product, the fingerprint sensor is encased in its own protective housing and mounted on the exterior of the vehicle. Pages 4-5, [0019]. Part of the housing is a hinged protective cover over at least the sensor, page 5, lines 7-12 [0020], figs. 1, 1A. OEM systems are incorporated into other characteristics of the vehicle, increasingly on the center dash/console of an automobile.

A means for connecting the sensor to a power source (power cord) is required. The power requirements and voltage regulation such as by a step-down transformer are described at page 6, lines 10-17 [0024].

In the preferred embodiment, the sensor and housing are separated from the "black box" containing the electronic storage and switching devices and connected by cabling, pages 5-6 [0022].

For conservation of energy and the fingerprint sensor, there is a "sleep mode." The system must be awakened and brought to full power before it is functional. Page 5, lines 7-21 [0020] [0021], page 8, lines 10-16, [0030] [0031].

The final step and the objective of the invention is to activate whatever system is required to allow personal access to the vehicle. This requires that the sensed fingerprint has the correct mathematical features (identifiers; digital representations of prints) which are retrieved from a look-up list and confirmed, followed by activation of an electro-mechanical system unlocking at least an access door of the vehicle.

Means for effectuating the access function are described at page 5, last lines [0022], page 6, lines 1-24 [0023] through [0025].

The above-listed claim elements are recited in claim 19. Dependent claims further delimit the claim by specifying that the fingerprint sensor is protected by a sealed housing. Page 5, line 15, claim 20.

A wake-up switch (claim 23) is described at page 5, lines 7-21 [0020] [0021].

Many "smart keys" include separate buttons allowing the holder to open one door of an automobile, all doors, or the trunk only. Similar flexibility may be found in the use of multiple switches on the face of Appellant's housing adjacent to the fingerprint sensor. These are described at page 8, lines 16-20 [0033] and shown as 19a – d in Fig. 1A.

In some embodiments the "black box" for processing fingerprint information may be included in the protective housing 1. Page 9, line 10 [0034].

The device claimed by Appellants is particularly adapted to fleet usage. A shuttle card (claim 28), a secure portable electronic data storage device may be used to obtain access to one or a fleet of vehicles (claim 30). The card securely carries the

mathematical features of the users fingerprint and a security access code specific to the vehicle or fleet. This is described at page 11, lines 8ff [0041]. When a user wants fingerprint access to the vehicle, the card is first presented to a reader on the interior of the vehicle and, contingent upon a match in the security access code, the mathematical features of the users fingerprint are transferred to the fingerprint sensor module on the vehicle. Subsequent access to the vehicle may be done solely via the fingerprints of the user. Note that the shuttle card serves as a secure, automatic, enroller. Shuttle cards, in various forms, have been in use since the 1990's. The variant described herein is particularly adapted to use with a portable security system such as this.

Necessary to the effective use of a shuttle card is a method for securely transferring the information on the shuttle card to the interior located card reader. Standard interface techniques used by smartcards are preferred. These involve both contact and non-contact interfaces. RFID communication, claim 29, is a non-contact communication means as described at page 12, lines 1 – 4.

A separate enroller device is used as the primary method for activation according to this invention, again for security purposes. An informed thief cannot self-enroll on the vehicle. As a secondary precaution, the password for each vehicle is required for enrollment (claim 34), page 7, lines 8 – 20 [0026], [0027].

The enroller in the preferred embodiment is not self powered but derives power from devices powered from the positive side of the vehicle battery and a common ground (claim 36), page 7, lines 14 -1 6 [0027].

Ancillary to access control is activation and utilization of the vehicle. (Claims 37, 38 are directed to control of the engine cranking circuit from the controller, page 10, lines 5-8 [0036]. (This is different from interdiction of the ignition or fuel supply as used in OEM systems.)

The modern motor car is computer controlled to an extent unimaginable a decade ago. When the electrical system drops below a minimum voltage, almost nothing works and a battery may not be accessible in the trunk or even under hood! Changing batteries, a necessity after several year's service, requires that a voltage source be provided to maintain circuit voltage during the changeover. Applicant's claim 17 addresses this need by providing a battery power source sufficient to start the vehicle, at least on the first try. (Claim 17; page 12, lines 12-19 [0045].

Grounds for Rejection for Review on Appeal

In the Final Rejection mailed May 14, 2007, the following grounds were posited:

1) Claims 19, 20 and 23-26 under 35 USC 103(a) over Hsu et al., U.S. Patent Number 6,100,811 in view of DeBono, and U.S. Patent Number 6,927,671 and in further view of Radke, Publication US2004/4015572 (now abandoned).

Claim 17 (supplemental battery) was rejected over Hsu et al., DeBono and Radke in view of Foster, Jr., U.S. Patent Number 5,668,929.

Claims 28 and 29 (shuttle card) were rejected as obvious over Hsu et al. in view of Debone and Radke and in further view of Carta International WO02/091311.

Claim 30 was rejected as obvious under 35USC 103(a) over Radke in view of Shohara, U.S. Patent Number 6,473,607. Applicant submitted a cancellation request in the paper filed after Final Rejection, but the Advisory Action indicates it continues to pend. Applicant restates herein his desire to cancel claim 30.

Claims 34 and 36 through 38 (enroller) were rejected as obvious over the combination of Hsu et al., DeBono, Radke and Bonder, U.S. Patent Number 6,078,265.

Claim 35 (shuttle car) was rejected over Hsu et al. in view of DeBono, Radke and Bonder in further view of Dutu, U.S. Patent Number 6,727,800.

No issues under §112 or §102 are pending.

Argument

The rejection of all claims, save claim 30, includes the reference Hsu et al., U.S. Patent Number 6,100,811. Hsu et al is directed to an apparatus and corresponding method for accessing the interior of automobile or operative components thereof.

The correct teachings of Hsu et al. are in dispute. The recitation in the abstract reads:

“At least one fingerprint sensor (16) installed inside the vehicle (at 14) in or near a door handle (12).”

This description and Figs. 1, 2 and 3 have been a basis for alleging that Applicant's protective housing is disclosed by this reference. The explanation is as follows:

"Hsu et al. teaches fingerprint sensor is provided with a protective cover because the fingerprint sensor is indicated by broken line (figure 3) suggesting that the fingerprint sensor is covered by the door handle."
(emphasis added)

The specification at col. 4, lines 42-47 reads:

"Fig 2 is similar to Fig. 1, but shown as an alternative location for the sensor 14, on the underside of the door handle 12... This approach works best for door handles of the recessed type that have to be pivoted out of a recess by placing a finger beneath the handle and pulling it out." (emphasis added)

Alternative locations are depicted in Fig. 4 as 16 a through d. All are open, uncovered and within the cabin of the vehicle.

Since sensor 14 must be mounted on the surface of the handle 12, facing toward the door panel, and pulled open by the finger, the face of the sensor cannot have a protective cover. Anyone who has driven in snow-prone areas knows that road salt and grime will find any surface on the exterior of a vehicle, including any gap or crevice.

DeBono, U.S. Patent Number 6,927,671 has been combined with Hsu on the basis that the "sensing" means may be covered from view by a covering means which is capable of being moved to access the biometric sensing means. The means is unabashedly a cosmetic cover, not a protective cover. Furthermore, it is in all embodiments located within the cabin, not without.

Protection of the sensor is not the objective- or teaching- of DeBono in locating the sensor. Stealth motivates the location as stated at col. 9, line 17-19. Contrast this with Fig.5, which places the sensor 21 alternatively on the steering wheel or center console.

Appellant's protective housing with cover is located on the exterior of the vehicle, preferably at the base of the windscreen, a totally visible location.

The Radke publication (no patent was granted) is cited for a sleep/wake-up mode for power conservation. Appellant concedes that a sleep mode- power up cycle- is not per se patentable.

Appellant concludes that the wrong standard for obviousness is being applied. The Office concedes that the Hsu et al. reference is silent on a rigid hinged cover and is not explicit in teaching means for connecting the sensor to a power source, Office Action dated May 14, 2007, page 4, last paragraph. DeBono is "relied upon for teaching a hinged protective rigid cover (col 7, lines 10-15). The protective cover for the fingerprint sensor is located inside the vehicle..." Advisory Action of August 22, 2007.

The "TSM" test (teaching, suggestion and motivation) applied as an inflexible rule was overturned by the Supreme Court in *KSR v. Teleflex*, 127 S.Ct, 1827 (2007).

However, the Court noted that:

"Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." Id at 1841.

Proper application of 35USC §103 continues to demand an inquiry to whether:

"a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and whether there would have been a reasonable expectation of success in doing so" *Dystar Textilfärken GmbH v. G.H. Patrick Co.*, 464 F 3rd, 1356, 1360 (Fed Cir 2006) cert. denied 127 S.Ct, 2937 [emphasis added]

In the instant circumstance, Hsu et al. contains no explicit teaching of a protective cover for the fingerprint sensor and, at Fig. 1, shows a totally exposed sensor thereby teaching away from the use of a protective cover. DeBono teaches a cover 31 in one embodiment as an "extra object" professing a putative desire to place the sensor

in a “location within the vehicle normally hidden from view.” (col 5, lines 13-15). The criticality of this criterion is defeated with reference to Figs. 5 which discloses five locations wherein no effort is made to hide the scanner. (Note also Fig. 8.)

When there is no teaching directing one to protect (not hide) a sensor, the approval of the Court, in establishing a motivation and identifying a reason to combine, remains important, *KSR* @ 1741. This is especially so when the protective function is critical to the operability of the invention.

The Court in *KSR* in no way rejected the concept of “teaching away” when analyzing the relationship of the references and the Appellant’s invention and criticized the arguments of *Teleflex* for not showing anything in the prior art as a teaching away.

In the instant circumstance, the DeBono reference teaches an interior cover as a means of sequestration, not protection, and endorses open scanners in Figs. 5 and 8. The other references cited during prosecution include Radke, U.S. Patent Publication 2004/0155752 which uses an external sensor to open a cover (cf Fig. 4, 5); Foster discloses a mixed audio/tactile system with an open speaker box and key pad; “Carter International” WO02/091311 discloses an interior (building) card reader cum biometric sensor system for area security. The device is wall mounted adjacent an access door; and Shohara et al., U.S. Patent No. 6,473,607 which is directed to a communications system including a sleep/wake-up mode but no finger print entry component.

Bonder, U.S. Patent Number 6,078,265 discloses a fingerprint-based system for access based upon a separate key which reads the print of the holder. Dutu, U.S. Patent Number 6,727,800 discloses a fingerprint system without mention of or a means for protection of the sensor. Usui, Japanese Patent Application No. 2000-356246 discloses a combination of key and fingerprint sensor to activate a door to a building. The fingerprint sensor may be in a box.

Reardon, U.S. Patent No. 5,078,426 discloses a method for document authentication in which a fingerprint is preserved on a print-sensitive material under a protective cover flap. Anzai, U.S. Patent Number 6,271,745 discloses a fingerprint access and enablement system with multiple sensors, but no indication of physical protection.

Gotfried, U.S. Patent Number 6,819,248 discloses a lock box for a car key which is non-responsive upon detection of a chemical. Joao, U.S. Patent Number 6,542,076 (cited but not applied), is not relevant to the claims currently on appeal.

Murphy, U.S. Patent Number 6,225,890 is directed to methods for controlling access and use of a vehicle which may include biometric indicators for the driver including fingerprint and blood samples. Location of the sampling system is not specified as protected.

In conclusion, the prior art cited through multiple Office Actions discloses one example of a cover in the interior of a vehicle which may be hidden from view and one fingerprint sensor in a box outside the exterior door of a building. The totality of the art directs on away from the use of a protective cover for a fingerprint sensor on a car to avoid damage from road grime and other insults during the lifetime of the sensor.

Rejection of Claim 19 under §103 and Claims 20 and 23 – 26 Dependent Thereupon

Claim 19 (independent) and claims 20 and 23 through 26 were rejected over the combination of Hsu, DeBono and Radke. As discussed *supra*, these references neither singularly nor in combination, disclose the system wherein the sensor on the exterior of a vehicle is protected with a rigid hard cover.

Rejection of Claim 17 under §103

Claim 17, dependent upon aforementioned claim 19, has been rejected over Hsu et al., DeBono, Radke and Foster. Two bases for rejection have been posited. DeBono is interpreted to imply (Office Action of May 14, 2007), that the backup battery has sufficient power to “enable the device to provide access to the vehicle and to recharge the battery.” The second relates to the use of a rechargeable secondary battery.

No support is provided for the Examiner’s implication that a backup battery, rechargeable or not, is sized to recharge a main 12 volt battery sufficiently to restart the car. Locking systems of the type disclosed work at reduced voltage (note Appellant’s, page 9, lines 6-7). The secondary battery must have the voltage and residual capacity to recharge the main battery to a sufficient voltage to restart the motor. A 9 volt battery for a smoke detector does not cut the mustard. A 12 volt, backup is needed for adequate emf.

Rejection of Claims 28 and 29 Under §103

Applicant is effectively estopped from arguing against the rejection of claims 28 and 29 because the amendment o claim 28 attendant explanation in the remarks is the paper filed after Final were not entered. The explanation for the rejection attests to the Examiner’s misunderstanding of the shuttle card. The shuttle card includes information necessary to input an individual’s prints, as an alternative to separate enrollment in each vehicle in a fleet of vehicles. The Carta reference, in contrast, validates the card [0019]. These are different processes and different information is carried on the cards. Furthermore, the card is needed for each entry. Its loss, like that of a key, destroys the system.

Rejection of Claim 30 Under §103

It is Appellants desire to cancel this claim and he shall argue not herein.

Rejection of Claims 34 and 36 – 38 Under §103

With regard to claims 34, and 36-38, the critical reference, Bonder, does not teach a password protected reader. Again, as noted *supra* the reference is backwards.

The Examiner has maintained the erroneous position that the limitation to an aftermarket device does not give patentable weight to the invention. The distinction between OEM and after market is well established in the industry especially for accessories.

According to both authorities cited, *In re: Hirao and Kropa v. Robie*, the preamble is a vital part of a claim. The preamble must be given patentable weight when the preamble is necessary to give life and meaning to a claim. In the automotive world, OEM and aftermarket are well defined and separately developed product lines. The OEM system is fully integrated into the electrical loom, exterior and interior architecture, warranties and dealer service training. A fingerprint-activated access and activation system installed as an assembly line item is specific for a manufacturer, can be disabled but not removed to a product of a different manufacturer (in most instances), being a permanent part of the vehicle as delivered to the dealer.

Aftermarket products, whenever possible, are designed to be used across manufacturer and model lines. They must be installed around the factory components and come with their own wiring and separate attachment points. This distinctness is precisely the same as that to which *Kropa* teaching was directed.

The distinction noted *supra* is precisely why Applicant's hinged protective cover (claim 19, part a) is critical and distinct from Hsu and De Bono. The drawing (Fig 3) from Hsu upon which the Office relies is not a hinged protective cover. Instead, as stated at col. 4, lines 41 – 47, the sensor is on the underside of the door handle so that the print can be read and the handle pulled simultaneously, as the handle is cupped in the fingers.

In addition, Appellant reiterates that Bonder uses the key-based system described above. The key remains critical to the system. With Applicant's shuttle card, the card enrolls and empowers the fingerprint indefinitely.

Rejection of Claim 35 Under §103

Claim 35, since amended, had been rejected under the chain of Hsu, De Bono, Radke, Bonder and Dutu. Firstly, the amended claim makes clear that the system does not enable a shuttle card for all cars. Secondly, this daisy chain of references is not what the Supreme Court intended when defining “obviousness” and “obvious to try” in KSR. A reasonable limit remains on the number of references applied to one claim.

In summary, the references cited against Appellant’s claims require the Examiner to speculate. The field of invention is aftermarket fingerprint-based access to a vehicle, especially a motor vehicle. Aftermarket, as opposed to OEM, requires the device to be adaptable over numerous car lines and model years, to be installed and removed so that no cutting of the exterior or interior is required, and that the device is reusable on a different vehicle. The references do not teach such a device and numerous assumptions are made by the Examiner to force fit the references to the claimed invention. The thought process is one of hindsight, the wisdom of the man at the parts counter who says he has all of the pieces, but cannot understand why anyone would want them at the same time. Invention is seeing how they can be used together to obtain something new and useful. Such is Appellants invention.

Appellant submits that allowable claims are present and requests reconsideration on the basis of this position.

Claims Appendix

In the Claims:

Claims 1 through 16, 18, 21-22, 27 and 31-33 (Cancelled).

17. (Currently Amended) A device according to claim 19 further comprising a rechargeable backup battery of sufficient capacity to enable a device to provide access to the vehicle and to start the vehicle after partially recharging the main battery when a main battery has been discharged.

18. (Cancelled)

19. (Currently Amended) A An aftermarket device to provide fingerprint access to the interior of an enclosed vehicle, said vehicle having an electrically or electronically activated access control system, comprising:

- a) a protective housing mounted on the exterior of said vehicle, said housing including at least an electronic fingerprint sensor; and a hinged protective rigid cover over said sensor;
- b) means for connecting said sensor to a power source;
- c) means for connecting said fingerprint sensor to an electronic circuit for storing and verifying electronic fingerprint information;
- d) means to activate said electronic circuit, switching said circuit from a low-power sleep state to a higher-power active state wherein said sensor can acquire a fingerprint; and
- e) means to activate at least one device which allows access control upon verification of electronically stored fingerprint information.

20. (Previously Presented) A device according to claim 19 wherein said protective housing includes a sealed unit containing at least one electronic fingerprint sensor.

21. (Cancelled)
22. (Cancelled)
23. (Currently Amended) A device according to claim 24 19 wherein said means to activate said electronic circuit is at least one switch separate from said hinged cover.
24. (Currently Amended) A device according to claim 24 23 wherein said means to activate said electronic circuit includes means to select a function.
25. (Previously Presented) A device according to claim 23 wherein multiple switches separate from said hinged cover each select a different function.
26. (Previously Presented) A device according to claim 19 wherein said electronic circuit for storing and verifying electronic fingerprints is within said protective housing.
27. (Cancelled)
28. (Previously Presented) A device according to claim 19 further comprising a shuttle card reader within or without a vehicle which reads a shuttle card enrolled at a different location with fingerprint information.
29. (Previously Presented) A device according to claim 28 wherein said shuttle card is radio frequency identification device containing fingerprint information.

30. (Currently Amended) A method to conserve energy and protect an electronic fingerprint sensor comprising:

- a) a clock which counts time since last input into electronic circuit;
- b) means responsive to said clock which cuts power to said fingerprint sensor upon elapse of specified number of counts; and
- c) means for re-energizing said fingerprint sensor responsive to ~~an outside stimulus activating a switch which selects a function.~~

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Currently Amended) A device according to claim 19 further comprising a detachable enroller device which is password protected with a vehicle specific password and enables enrollment of a fingerprint in an electronic circuit for storing and verifying electronic fingerprint information.

35. (Previously Presented) A device according to claim 34 wherein said enroller device enrolls a shuttle card containing fingerprint information.

36. (Previously Presented) An enroller according to claim 34 which derives power from an electronic circuit for storing and verifying electronic fingerprint information.

37. (Previously Presented) A device according to claim 19 further comprising a starter interlock which prevents starter actuation without the presentation of a valid fingerprint.

38. (Previously Presented) A method for the prevention of unauthorized use of a vehicle comprising a system to provide fingerprint access to a vehicle and a relay which is a starter interlock, wherein a valid fingerprint must be provided to said system before a starter motor can be operated.

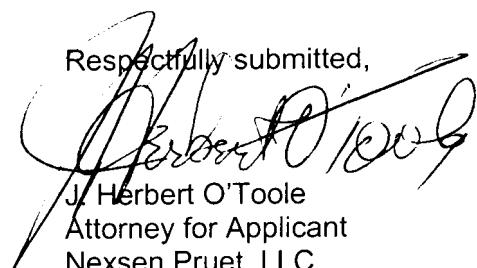
Evidence Appendix

None

Related Proceedings Appendix

None

Respectfully submitted,

A handwritten signature in black ink, appearing to read "J. Herbert O'Toole".

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